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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,008	08/26/2003	David B. Dwyer	H0004368	6065

128 7590 05/11/2009

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EXAMINER	
DAGER, JONATHAN M	

ART UNIT	PAPER NUMBER
3663	

MAIL DATE	DELIVERY MODE
05/11/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/650,008	DWYER, DAVID B.	
	Examiner	Art Unit	
	JONATHAN M. DAGER	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) *13-22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12, 23, 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see pages 7-8, filed 20 January 2009 have been fully considered but they are not persuasive.

Regarding claims 1, 23, and 24, Gibbs discloses an integrated graphical user interface which facilitates the display and editing of aircraft flight-plan data. A user (e.g., a pilot) located within the aircraft provides input to a processor through a cursor control device and receives visual feedback via a display produced by a monitor. The display includes various graphical elements associated with the lateral position, vertical position, flight-plan and/or other indicia of the aircraft's operational state as determined from avionics data and/or various data sources. Through use of the cursor control device, the user may modify the flight-plan and/or other such indicia graphically in accordance with feedback provided by the display. In one embodiment, the display includes a lateral view, a vertical profile view, and a hot-map view configured to simplify the display and editing of the aircraft's flight-plan data (abstract).

Thus, Gibbs has provided for an aircraft display wherein textual flight plan data may be displayed. It is noted that Gibbs does mention that the data displayed may be avionics data or information provided form other sources. Avionics, as is known in the art, are defined as aviation electronic equipment, which includes aircraft radios, instrumentation, guidance, control, communications, and navigation equipment. This at least suggests, if not implicitly anticipates, the embodiment wherein the display is configured for receiving and displaying ATC clearance messages.

Gibbs provides further disclosure pertaining to the capabilities of the system by providing that with another aspect of the present invention, the display suitably includes a series of menu items which function, in some cases, as both pop-up menus and annunciators. FIGS. 11A-11F show one particular example of such annunciators. In FIG. 11A, a series of annunciators 1102-1109 are displayed, including Options, Ground, Traffic, Weather, Boom, Airspace, Nav Data, and Datalink. In general, these menu items are annunciators in that they are color coded depending upon whether the various selected options within that menu are active. That is, by double-clicking on any particular annunciator, the system toggles between a state where none of the options are active and a state where the previously selected options are active. Each state is indicated via color-coding or any other identification means (column 7 lines 1-13).

Thus, the system of Gibbs is fully capable of receiving datalink (textual) messages from ATC and displaying them to the aircrew via MFD.

Gibbs discloses a processor 106 configured to communicate with an associated monitor (or monitors) 112, one or more data sources 108, cursor control device 104, and avionics data 10. In general, a user 102 (e.g., a pilot), located within the aircraft (not shown) provides input to processor 106 through cursor control device 104, and receives visual feedback via a display 114 produced by monitor 112. Display 114 includes various graphical elements associated with the lateral position, vertical position, flight-plan and/or other indicia of the aircraft's operational state as determined from avionics data 110 and/or data sources 108. Through use of cursor control device 104, user 102 may modify the flight-plan and/or other such indicia graphically in accordance with feedback provided by display 114 (column 3 lines 8-20).

Thus, Gibbs has disclosed a processor adapted to receive data representative of the current aircraft flight plan, and capable of receiving one or more textual clearance message signals representative of the textual ATC data transmitted via datalink to the aircraft. Further, the above citations provide that the processor is operable to, in response to receiving data from various sources, supply one or more flight plan display commands and one or more textual clearance message display commands to the aircraft display(s).

Further, the above provides for a display coupled to the processor (also see fig. 1) to receive the flight plan display commands and operable to substantially simultaneously display one or more images representative of the current aircraft flight plan and textual ATC clearance messages transmitted to the aircraft (also see figs 2-4 and 7).

Still, while it may be inplicit or obvious that the system of Gibbs is configured for receiving and displaying ATC clearance messages (textual), it is still not explicitly disclosed.

Dame teaches a Controller-Pilot Data Link Communication (CPDLC) module that can be operatively connected to a cockpit audio system to aurally provide pilot messages the module receives from ground control and to allow the pilot to operate the module with spoken commands. The module includes an enunciator circuit for playing out a string of digital audio data associated with a message and a voice recognition component for recognizing spoken commands and performing tasks in response to the commands. Thus, the pilot can use CPDLC protocols to exchange information with ground control yet communicate with ground control by listening and talking as if he was communicating with a voice radio. The module can also visually present messages and other information and receive input from programmable buttons and a knob. The functions of the buttons and knob change as the operational state of the module

changes. For example, when the module displays current messages, pushing a button causes the module to perform a task, and when the module displays possible responses to a message, pushing the same button causes the module to perform a different task. Furthermore, the module can include, visually present and/or aurally provide a checklist of tasks to be completed when a message associated with the checklist is received or sent by the module (abstract).

Thus, Dame teaches an invention which clearly can be used with that of Gibbs, which can visually provide avionic information received from ground (ATC) control.

Dame further teaches that to exchange information between the pilot and ground control computers, the CPDLC system uses message sets that include clearance and response messages and a numeric code associated with each message that is transmitted between the pilot and controller computer. FIG. 1 shows a table of a current message set 10. As shown in FIG. 1, the messages 12 can be divided into two groups, uplink 14 and downlink 16. Uplink messages are sent from the ground controller to the pilot, while downlink messages are sent from the pilot to the ground controller. Some uplink and downlink messages require the sender to include additional information in the message, such as altitude, speed or position to complete the message. For example, the uplink message "CLIMB TO" requires an altitude value for the message to make any sense to the pilot. The numeric codes are digitized and exchanged between the aircraft and ground control computers. Once a computer receives a numeric code 18, the computer converts the code 18 into text and displays the text. Thus, when the aircraft computer receives a digital data message from the ground control computer, the aircraft computer displays the uplink message associated with the numeric code and vice-versa. In this manner, the

messages can be efficiently sent from ground to air or air to ground via a digital stream of information that is encoded into a VHF, HF or satellite based transmission (para 0005).

Thus, it is explicitly taught that the aircraft processor can receive textual ATC clearance messages. Further, Dame clearly teaches that this received data can be displayed on an aircraft monitor.

Gibbs has disclosed a base invention which is capable of all functions of the claimed embodiments, including receiving datalink messages and other avionic data, as well as displaying flight plan information as well as the datalink messages and avionic data. Gibbs discloses all structural elements. Where Gibbs is deficient, with respect to claim 1, is that Gibbs does not explicitly disclose the reception and display of ATC clearance texts. Dame cures the deficiency by providing for display of ATC clearance data in the aircraft, and provides for identical structural components.

Thus, since both inventions both disclose/teach similar elements and usage, it would have been obvious to one of ordinary skill in the art at the time of the invention to simply substitute one apparatus into the other, or at least combine their respective elements, to achieve no more than the predictable result of a aircraft FMS configured to interact with ATC and display the textual clearance data received during communication.

Combining prior art elements according to known methods to yield predictable results is a rationale to support a conclusion of obviousness. See MPEP 2143(A).

Simple substitution of one known element for another to obtain predictable results will support a conclusion of obviousness. See MPEP 2143 (B).

1a. It is noted from the arguments presented that the Applicant contends that the inventions of Gibbs and Dame both teach away from that which is claimed.

The Examiner respectfully disagrees; the invention of Gibbs is drawn toward reducing the heads-down time, and works toward solving the problem of flight crews altogether abandoning the FMS (column 1 lines 47-63) while retaining pertinent data displaying capability. In providing a more efficient user interface, Gibbs overcomes the deficiencies in the limitations in the prior art, and clearly teaches towards that which is claimed.

Dame, similar to Gibbs and the current application, additionally provides display elements and explicit textual communication capability with ATC. While it is noted that Dame does admit that the invention does not have to be integrated into the FMCS (para 0023), Dame does not explicitly state that the invention is solely to be used without interaction of other systems. Conversely, Dame just provides for a separate display interface, as opposed to incorporating the invention onto a typical aircraft MFCD. The invention of Dame still has to use the same wireless means to communicate (avionics) with other sources that would be found in the invention of Gibbs (i.e. interfaces, processors, transceivers, antennas, etc.).

Therefore, claims 1, 23, and 24 remain rejected as obvious in view of the combination of Gibbs and Dame, for those reasons cited above and those mentioned in the prior office actions, which are incorporated herein.

2. Applicant's arguments, see page 8, filed 20 January 2009, with respect to the rejection of claims 2-12 under 35 U.S.C. 103(a) have been fully considered but they are not persuasive.

The Applicant has contended that since claims 2-12 depend from the now allowable independent claim1, the claims are allowable.

The Examiner respectfully disagrees; independent claim 1 remains rejected, hence, claims 2-12 remain rejected under 35 U.S.C. 103(a) as obvious over Gibbs in view of Dame, for those reasons cited above as well as the previous grounds discussed in the prior office action, which are incorporated herein.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN M. DAGER whose telephone number is (571)270-1332. The examiner can normally be reached on 0830-1800 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JD
04 May 2009

/Jack W. Keith/

Supervisory Patent Examiner, Art Unit 3663